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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,620	08/28/2003	Kenneth S. Price	DP-309156	7734

22851 7590 08/23/2004  
DELPHI TECHNOLOGIES, INC.  
M/C 480-410-202  
PO BOX 5052  
TROY, MI 48007

EXAMINER

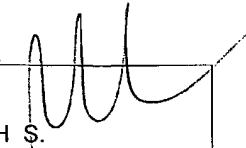
TRAN, BINH Q

ART UNIT PAPER NUMBER

3748

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/650,620	<b>Applicant(s)</b> PRICE, KENNETH S. 	
	<b>Examiner</b> BINH Q. TRAN	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in–

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

*Claims 1-13, and 15 are rejected under 35 U.S.C. 102 (b) as being anticipated by*

*Hirota et al. (Hirota) (Patent Number 5,884,476).*

Regarding claims 1, 8, 11, and 15, Hirota discloses a control system for controlling temperature of an exhaust aftertreatment device (16) of a compression-ignition engine (1), comprising: a controller (30), said controller signally electrically attached to an exhaust temperature sensor (37), and operably attached to a plurality of fuel injectors (9); wherein said controller is operable to: monitor operation of the compression-ignition engine, based upon input from the exhaust temperature sensor, determine a temperature of the exhaust aftertreatment device, based upon the monitored operation of the compression-ignition engine and input from the exhaust temperature sensor; and control

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an engine operating point by controlling the plurality of fuel injectors, based upon the determined temperature of the exhaust aftertreatment device (e.g. See col. 4, lines 16-67; col. 5, lines 1-31).

Regarding claim 2, Hirota further discloses the step of monitoring engine fuel delivery and monitoring engine rotational speed (e.g. See col. 7, lines 64-67; col. 8, lines 1-51).

Regarding claim 3, Hirota further discloses the step of monitoring temperature of the exhaust aftertreatment device using a temperature sensor (e.g. See col. 4, lines 16-67; col. 5, lines 1-31).

Regarding claims 4 and 12, Hirota further discloses the step of modeling temperature of the exhaust aftertreatment device based upon input from the temperature sensor (e.g. See col. 4, lines 16-67; col. 5, lines 1-31).

Regarding claims 5 and 9, Hirota further discloses the step of reducing the engine operating point when the determined temperature of the exhaust aftertreatment device exceeds a predetermined value (e.g. See col. 4, lines 16-67; col. 5, lines 1-31).

Regarding claims 6, 10, and 13, Hirota further discloses the step of controlling fuel delivery to the engine from a plurality of fuel injectors (e.g. See col. 7, lines 64-67; col. 8, lines 1-51).

Regarding claim 7, Hirota further discloses the step of controlling exhaust gas recirculation to the engine (e.g. See col. 4, lines 16-67; col. 5, lines 1-31).

*Claims 1-14 are rejected under 35 U.S.C. 102 (e) as being anticipated by Morimoto et al. (Morimoto) (Patent Number 6,708,487).*

Regarding claims 1, 8, 11, and 15, Morimoto discloses a control system for controlling temperature of an exhaust aftertreatment device (e.g. 13) of a compression-ignition engine (40), comprising: a controller (14), said controller signally electrically attached to an exhaust temperature sensor (53), and operably attached to a plurality of fuel injectors (42); wherein said controller is operable to: monitor operation of the compression-ignition engine, based upon input from the exhaust temperature sensor, determine a temperature of the exhaust aftertreatment device, based upon the monitored operation of the compression-ignition engine and input from the exhaust temperature sensor; and control an engine operating point by controlling the plurality of fuel injectors, based upon the determined temperature of the exhaust aftertreatment device (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

Regarding claim 2, Morimoto further discloses the step of monitoring engine fuel delivery and monitoring engine rotational speed (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

Regarding claim 3, Morimoto further discloses the step of monitoring temperature of the exhaust aftertreatment device using a temperature sensor (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

Regarding claims 4 and 12, Morimoto further discloses the step of modeling temperature of the exhaust aftertreatment device based upon input from the temperature sensor (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

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Regarding claims 5 and 9, Morimoto further discloses the step of reducing the engine operating point when the determined temperature of the exhaust aftertreatment device exceeds a predetermined value (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

Regarding claims 6, 10, and 13, Morimoto further discloses the step of controlling fuel delivery to the engine from a plurality of fuel injectors (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

Regarding claim 7, Morimoto further discloses the step of controlling exhaust gas recirculation to the engine (e.g. See cols. 7-8, lines 1-67; col. 9, lines 1-56).

Regarding claim 14, Morimoto further discloses that the engine output device further comprises a turbosupercharger (31).

#### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents:

Mukaihira et al. (Patent Number 5526643), Hirota (Patent Number 5839275), Tonetti et al. (Patent Number 6666020), and Fujieda et al. (Patent Number 6453871) all disclose an exhaust gas purification for use with an internal combustion engine.

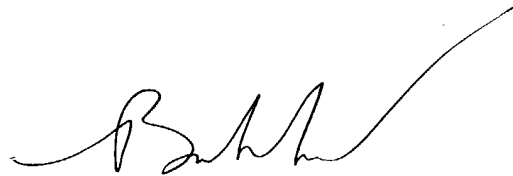
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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (703) 305-0245. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (703) 308-2623. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read 'Binh Tran', with a long, sweeping horizontal line extending to the right.

BT  
August 20, 2004

Binh Tran  
Patent Examiner  
Art Unit 3748